

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

5 DEC 2005

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

X16288

Applicant's or agent's file reference  
see form PCT/ISA/220

## FOR FURTHER ACTION

See paragraph 2 below

International application No.  
PCT/US2005/005226

International filing date (day/month/year)  
18.02.2005

Priority date (day/month/year)  
05.03.2004

International Patent Classification (IPC) or both national classification and IPC  
C07C217/20, C07D295/12, C07C323/25, C07C55/10, C07C53/18, A61K31/13, A61K31/40, A61P25/00

Applicant  
ELI LILLY AND COMPANY

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2005/005226

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

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The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,  
☒ claims Nos. 31-32 (both with respect to industrial applicability)

because:

- ☒ the said international application, or the said claims Nos. 31-32 (both with respect to industrial applicability) relate to the following subject matter which does not require an international preliminary examination (*specify*):

**see separate sheet**

- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the whole application or for said claims Nos.
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
- |                            |  |
|----------------------------|--|
| the written form           | <input type="checkbox"/> has not been furnished            |
|                            | <input type="checkbox"/> does not comply with the standard |
| the computer readable form | <input type="checkbox"/> has not been furnished            |
|                            | <input type="checkbox"/> does not comply with the standard |
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2005/005226

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	19
	No: Claims	1-18,20-32
Inventive step (IS)	Yes: Claims	
	No: Claims	1-32
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rules 43bis.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

**see form 210**

**Re Item III**

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

Claims 31 and 32 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(I) PCT).

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

D1: WO 01/62714 A (ASTRAZENECA AB; CHESHIRE, DAVID; CONNOLLY, STEPHEN; COX, DAVID; METE,) 30 August 2001

D2: US-A-4 956 388 (ROBERTSON ET AL) 11 September 1990

**1. Novelty**

**1.1** The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 - 18 and 20 - 32 is not new in the sense of Article 33(2) PCT. The document D1 discloses various 3-aryloxy/thio-substituted propaneamines (see D1, examples and claims), which fall within the scope of claims 1- 18 and their use in the treatment of pain. The subject-matter of claims 1 - 18 and 20 - 32 is therefore not novel in view of D1. It should be noted that a newly discovered technical effect (inhibition of the serotonin and norepinephrine reuptake) cannot establish novelty of a known use (treatment of pain) of a known compound.

The document D2 discloses 3-aryloxy-3-substituted propaneamines having a cycloalkyl residue (see D2, examples 15; 33 - 35; claims) and their use as inhibitors of the serotonin and norepinephrine reuptake. Thus, the subject-matter of claims 1 - 18 and 20 - 32 is also not novel in view of D2.

**1.2** The specific compounds disclosed in claim 19 appear to be novel with respect to the available prior art.

## **2. Inventive Step**

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 - 32 does not involve an inventive step in the sense of Article 33(3) PCT.

The subject-matter of claims 1 - 32, which is not novel cannot involve an inventive step either.

To the subject-matter of the present application, which is novel the following applies: In view of the prior art documents D1 and D2, the problem underlying the present application can be defined as providing further compounds which are inhibitors of the serotonin and norepinephrine reuptake and/or are useful in the treatment of pain. To solve this problem the Applicant provides the compounds of claim 19, which are, with respect to the prior art documents D1 and D2, either stereoisomers of compounds already known for the same use or obvious alternatives of said known compounds. Consequently, the compounds according to claim 19, their preparation (claim 20) and their use (claims 21 to 32) are not regarded as inventive.

## **3. Industrial Applicability**

**3.1** The subject-matter of claims 1-30 is industrial applicable.

**3.2** For the assessment of the present claims 31 and 32 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.